

A NEW STATION FOR *LISTERA AURICULATA* (ORCHIDACEAE) IN NEW YORK STATE¹

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The auricled twayblade, *Listera auriculata* Wiegand, is believed to be rare throughout its range and is currently under review for listing under the provisions of the 1973 Endangered Species Act (U.S. Fish and Wildlife Service, 1980). An essentially Canadian plant, the species ranges from the Maritime Provinces to the Lake Superior region; its southern limits in the U.S. are poorly known and in need of clarification if the species is to be properly treated under the terms of the Act. The principal works on the flora of the northeast and its orchids variously have cited the plant from New York (Morris & Eames, 1929; Fernald, 1950), tentatively reported it from the state (Gleason & Cronquist, 1963), or omitted the state from the species' range (Correll, 1950; Gleason, 1952; Luer, 1975). *Listera auriculata* has been known in New York from a single collection made over 50 years ago on the Tug Hill Plateau in Lewis County (27 June 1927, N. Hotchkiss 2453, NYS). Despite rather precise locality information augmented by the recollections of Hotchkiss (letter to Sheviak, February 1980), recent intensive searches have failed to relocate the population. Our recent discovery of a second population of the species in New York consequently is significant.

Listera auriculata typically occurs in alluvial sites along streams, commonly growing in open thickets of *Alnus* and *Betula pumila*, often in freshly deposited sand (Case, 1964; Whiting & Catling, 1977). Such habitat is poorly represented at the Tug Hill locality, where the species reportedly occurred in "rich mucky woods" (Hotchkiss, 1932). The failure of repeated attempts by Sheviak and his colleagues at the State Museum to locate the plant and the paucity of prime habitat at this locality led Sheviak to redirect his attention to the Adirondacks. In this region, apparently suitable

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habitat is very abundant, yet poorly studied, thus suggesting that the plant might occur there unnoticed.

In July, 1980, while conducting a survey for The Nature Conservancy along the upper Hudson River in Warren County, the Platts observed and photographed a fruiting *Listera*. Upon subsequent study of the photograph, Sheviak tentatively determined the plant as *Listera auriculata*, a determination based in large part on the riparian nature of the habitat and associated species. On 10 and 16 June 1981, we revisited the site to confirm the identification and found a colony of about 80 plants, of which 12 were in flower. The plants occur along a narrow strip of cobbly-sandy riverbank within the floodplain of the Hudson River, at the base of a northwest-facing slope. The community in which they occur is kept open by ice scouring which annually eliminates tree saplings and coppices scattered *Alnus*. The colony, within a few feet of the river, is overtopped by a fringe of *Tsuga canadensis* and *Fraxinus americana* from the adjacent slope. The *Listera* grow in open sand and mats of *Mnium* sp. and *Rhacomitrium* sp. (?) and frequently protrude through beds of water-deposited debris. The community is dominated by a dense stand of *Osmunda claytoniana*; *Alnus* growth is particularly suppressed in this area. Associated species include *Impatiens capensis*, *Maianthemum canadense*, *Veratrum viride*, *Thalictrum polygamum*, *Sanguisorba canadensis*, *Aster praealtus*, *A. acuminatus*, *Anemone canadensis*, *Sanicula marilandica*, *Luzula campestris*, *Carex* sp., and grasses. The colony is centered on a strip of riverbank receiving moisture from a small seep; although the *Listera* is scattered beyond this zone, the perennial seepage may promote the species' survival during abnormally warm or dry periods at this southern locality.

The abundance of apparently suitable habitat in the Adirondacks suggests that the species may be more widespread, and further searching may reveal additional colonies of this small, inconspicuous plant.

An initial collection of a single flowering plant (*Platt 81-28*) and a subsequent collection of individual flowers from a series of plants (*Sheviak 2019*) are deposited at NYS.

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